

## National Priority 6: CBRNE Detection Capability

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This section is intended to address issues such as:

### **Associated Capability: CBRNE Detection**

- What State and local preventative radiological and nuclear detection programs are planned or currently deployed within your State? This can include:
  - Maritime Programs
  - Commercial Vehicle Inspection
  - Special Event Screening
  - Routine Patrol Monitoring
  - Choke Point Portal Monitoring
- What resources are planned or currently located in your State for technical support in identifying radiological and nuclear materials as a part of detection operations?
- Do you have relationships with any Department of Energy laboratories to adjudicate radiation alarms?

### **Associated Capability: Explosive Device Response Operations**

*Reference the Target Capabilities List when describing your current level of capability. Specifically, consider the following information for the capability: Capability Description, Outcomes, Critical Tasks, and Performance Measures and Objectives.*

### **Associated Capability: WMD/Hazardous Materials Response and Decontamination**

*Reference the Target Capabilities List when describing your current level of capability. Specifically, consider the following information for the capability: Capability Description, Outcomes, Critical Tasks, and Performance Measures and Objectives.*

## **National Priority 6: CBRNE Detection Capability**

### **A. Accomplishments**

#### **Planning, Training and Exercises**

- There has been a recent revision of Volume Four of the Commonwealth of Virginia Emergency Operations Plan, which focuses on hazardous materials plan and terrorism response.
- The Commonwealth has developed and published a Foreign Animal Disease Response Plan and an Emergency Plant Pest Action Plan. These plans have been coordinated with stakeholders and are referenced in the EOP.
- Since October, 2005, multiple functional exercises have been conducted to evaluate exercise for a livestock or poultry disease outbreak. The Health Department, Food Safety Taskforce, local jurisdictions, and Federal stakeholders have participated.
- VDEM coordinates statewide training programs for HAZMAT Specialists to insure each responder achieves and maintains the level of competency necessary to perform his or her duties. Statewide training programs for HAZMAT responders have been updated to incorporate the ICS and NIMS response structures. This training involves State local employees, and occasionally, other Federal and neighboring State agencies send employees when space permits. There are 13 courses per year-- each course lasts for two weeks and can carry up to 30 students. Training needs to be expanded to increase courses by 4 or 5 classes per year in 2008 - 2010.
- Each of Virginia's 35 health districts has an emergency planner and an epidemiologist. The Virginia Department of Health (VDH) has a "green" rating for its strategic stockpile plan and has exercised that plan in a pandemic-flu exercise. Every year each health district conducts an exercise for mass-dispensing vaccines.

#### **Facilities**

- This year, the Commonwealth finished building a bio-security Level 3 suite for trained personnel to contain, safely work with, and provide diagnostic testing on highly pathogenic biological agents.

#### **CHEMPACK**

- The Commonwealth is working to maintain and improve, where appropriate, the Strategic National Stockpile (SNS) and CHEMPACK Plan preparedness functions in consideration of Federal, State, and focal partnering efforts. Plans and procedures have been developed to prevent, detect, report, investigate, control, and recover from infectious disease outbreaks caused by natural or terrorist events. In addition, the Commonwealth has approximately 48 CHEMPACKs, all of which were on standby for the Queen of England's recent visit.

#### **Bio-Watch**

- Bio-Watch is an early warning system designed to detect biological agents through continuous air sampling throughout OCME Morgues and multiple indoor detection sensors in the coolers and over the autopsy tables. The Medical Examiner has been tasked

with ensuring the safety of those handling contaminated remains and the safety of the public through this program.

### **Personnel**

- The Technological Hazards Division (THD) is responsible for implementation of the HAZMAT Emergency Response Program that is based on a State and local government partnership which applies standard training for all HAZMAT responders and on local response capabilities supported by state sponsored regional HAZMAT technical response teams. THD has nine hazardous materials officers, eight of whom are assigned to geographic regions to oversee and assist localities in response to hazardous materials incidents. These officers are highly trained and highly equipped responders who are notified of any potentially hazardous incident within their territory; working with the 13 regional HAZMAT response teams to verify threat potential and determine prevention and remediation actions to be taken to protect the citizenry, environment, and infrastructure within the Commonwealth. The hazardous materials officers are a vital link between the state, localities, citizenry, and private industry in coordination, training, preparedness, response, and recovery for hazards resulting from natural as well as man-made incidents. The THD also establishes and provides a training program based on a four-tier curriculum that is aligned with the NFPA 472 standards and OSHA 29CFR1910.120 criteria.
- The nine State hazardous materials officers have the ability to provide phone technical assistance or respond with the Regional Hazardous Materials Team. Twenty-two jurisdictions make up the 13 teams and there are other non-state supported teams, as well as NG/34 CST, all of which are trained to the Hazardous Materials Specialist level.
- The Virginia Department of Environmental Quality (VDEQ) supports the hazmat response program with regulatory and environmental guidance and maintains the ability to perform highly technical air sampling and plume prediction. VDEQ is an integral part of the hazardous materials program.
- Hazardous Materials Officers, Regional Hazardous Materials teams, Virginia State Police Counter-Terrorism and Criminal Interdiction and National Guard's Civil Support Teams current status provides well-needed coverage and protection against WMD and HAZMAT incidents.

### **Regional Accomplishments**

As an example, the following accomplishments have been made by Region II :

- New communications systems coming on-line in a couple of counties
- In the counties without new communications systems, needs have been determined
- The relationships in many communities and within the region as a whole, have improved
- Special Operations Teams have been formed, equipped, trained and operational
- Rockingham County has created a Disaster Response Task Group: many local non-traditional response organizations involved
- Conducting assessments to determine needed plans and resources
- Exercises have successfully integrated the Incident Command System and foster relationships
- There have been new plans for responses developed and review and update of older plans

- Closely working with non-traditional response organizations
- Expanded EOC Operations in the region----New facilities and purchase of a Command Vehicle

In Region VII:

- New CBRNE units have been established, procedures for use of equipment have been improved, and an emergency website has been created.

## **B. Current Capabilities**

### **CBRNE Detection Capability:**

- The Virginia State Police conduct commercial vehicle inspections routinely, and the Virginia Department of Transportation checks of materials moving through highway
- The Virginia Port Authority is an independent agency that conducts maritime HAZMAT screening.
- VDACS has bought PPE in stock for evaluators of food products, and as a result can now take the necessary steps to test the food supply if needed.
- DNDO, in conjunction with the 34<sup>th</sup> Civil Support Team, Virginia National Guard conducts HAZMAT screening for special government events, such as large sporting events (such as events taking place at Martinsville Speedway.) There are 13 HAZMAT teams within DNDO and an additional 7 HAZMAT teams that belong to local jurisdictions. DNDO is well prepared to handle chemical events but is less prepared to handle biological events (which require fixed point monitors).
- VDEM has worked closely with the Department of Energy (DOE) and Oak Ridge National Laboratory to develop a program to locate and identify radiological material, confirm the presence of radiation, and determine the level of danger.
- Virginia's Hazardous Materials Response Program has many assets in place. These include:
  - Hazardous Materials Officers stationed statewide
  - Regional Hazardous Materials Teams positioned throughout the Commonwealth
  - VSP Counter-terrorism and Criminal Interdiction Teams
  - The Virginia National Guard 34<sup>th</sup> Civil Support Team
- The Division of Consolidated Laboratory Services (DCLS) assists in evidence testing, identifying unknown chemicals, and testing of suspicious white powder. They were one of the first four state laboratories selected and funded by the federal government to test specimens from people for evidence of exposure to chemical weapons. DCLS is Virginia's confirmatory laboratory for the national Laboratory Response Network and is the PulseNet Regional Laboratory for the Central Atlantic states. DCLS is a member of the Food Emergency Response Network and the Radiation Emergency Analytical Laboratory Network and provides emergency analytical support for Virginia, neighboring states, and federal agencies in response to public health and environmental threats.
- First responders and CI/KR personnel have received awareness level training for each of the CBRNE agents

- Appropriate personnel have been identified for CBRNE detection training (e.g., law enforcement, transit police and security, fire department, hazardous materials (HazMat), public health, private sector security, and critical infrastructure personnel)
- Frequency with which detection protocols for each of the CBRNE agents are exercised and evaluated
- Training for detection operators, laboratory staff, and critical infrastructure personnel has been conducted
- A program to test and evaluate new CBRNE technology in the appropriate operational environment is in place
- Detection training materials have been developed and validated for each CBRNE agent
- A process for analyzing exercise results and incorporating lessons learned is in place

**Explosive Device Response Operations Capability:**

- There is only one EOD Team in Virginia (located in Fairfax County) which does not belong to the Virginia State Police.
- Effective plans for Explosive Device Response Operations are in place
- Plans address standardized education to certify bomb technicians (e.g. FBI Hazardous Devices School, National Bomb Squad Commanders Advisory Board).
- Plans address onsite treatment of devices (e.g. deactivation, disruption, disabling, containerizing for transport).
- Plans address communications requirements (e.g. establish onsite command, control, communications and intelligence operations).
- Squads obtain the equipment and training to receive a Type I or II rating
- Effective tactics, techniques, procedures, and training are standardized and shared within the bomb squad community
- Effective practices and training are reinforced as needed during practical exercises that accurately replicate threats and operating conditions
- Diagnostics and render safe procedures are conducted as appropriate for threat and device type by function
- Device and/or components are prepared for transport to a safe and secure site for processing and/or disposal within time period determined by bomb technicians on the scene, in accordance with public safety considerations

**WMD/Hazardous Materials Response and Decontamination Capability:**

- Hazardous materials teams are capable of assisting the VSP in inspections.
- The Virginia Port Authority (VPA) can screen cargo for hazardous materials.
- WMD/HazMat Response and Decontamination plans are based on a formal assessment of risks and vulnerabilities.
- Risk analysis is completed for potential hazmat vulnerabilities, including fixed facilities and transportation-related emergencies
- Hazmat personnel are equipped and trained for weather prediction and hazard pluming
- Redundant hazmat response teams and equipment are available (or accessible through mutual aid agreements) to provide resiliency in the event of a large-scale incident
- WMD/HazMat plans address substance identification equipment (e.g. bases, vapors, liquids, solids, biological agents like white powder).

- WMD/HazMat plans address personnel needs (e.g. work/rest cycles, medical, psychological, financial assistance, etc).
- Jurisdiction's hazmat team(s) has current protocol to coordinate with law enforcement for evidence collection and crime scene control
- Jurisdiction's hazmat team(s) has current protocol to coordinate with emergency medical services (EMS) on victim care post-decontamination (identification of substance, administration of antidotes, etc.)
- Victims are provided maximum amount of privacy within site and situational constraints

### C. Three-Year Targets

#### CBRNE Detection Capability:

Target Description	Projected Completion Year	Status
The Commonwealth will have the infrastructure, plans, personnel, and training in place to monitor, identify, and protect the public against naturally occurring or intentionally' introduced diseases of livestock and crops, (disruption of food production and transportation;) and (terrorist attacks on) accidental or intentional contamination of the food supply.	2010	Open
The Commonwealth will conduct activities that will allow it to prevent, detect, report, investigate, control, and recover from infectious disease outbreaks caused by natural or terrorist events.	2010	Open
The Commonwealth will have the infrastructure, plans, personnel, and training in place to monitor, identify, and protect the public against naturally occurring or intentionally' introduced diseases of livestock and crops, (disruption of food production and transportation;) and (terrorist attacks on) accidental or intentional contamination of the food supply.	2010	Open

#### Explosive Device Response Operations Capability:

Target Description	Projected Completion Year	Status
	2010	Open
	2010	Open
	2010	Open

#### WMD/Hazardous Materials Response and Decontamination Capability:

Target Description	Projected Completion Year	Status
Shortfalls in the areas of WMD specifically in the areas of biological and chemical warfare agents and radiological attacks/disasters, as well as the ability to detect and protect the citizens from attack on our agriculture supplies to be addressed through equipment and training.	2010	Open
Provide equipment and training to ensure that first responders have the necessary tools for mass decontamination.	2010	Open
	2010	Open

## D. Initiatives

### CBRNE Detection Capability:

#### *Enhance CBRNE Detection and Identification Capabilities to Increase Community Safety (CBRNE Targets 1,2,3).*

##### Description:

The purpose of this Initiative is to detect and identify CBRNE compounds through fixed and mobile detection instrumentation. This initiative includes the creation of a fixed facility monitoring system around a rail yard or public facility as well as the purchase of instruments to enhance the capabilities of first and follow-on responders. The fixed facility monitoring system will consist of an open path FTIR, a set of multi-gas/chemical monitors, radiation detection equipment and a state of the art wireless communication system to interconnect all the equipment. When completed and the results documented, the fixed facility monitoring system will serve as a model for monitoring of high profile public infrastructure facilities.

The mobile CBRNE instrumentation will be deployed with first responders in areas identified as high risk and with the National Guard Civil Support Team as they provide State and region-wide coverage for CBRNE incidents. The equipment will include mobile open path FTIRs, aman spectrometers, gas chromatograph - mass spectrometers, x-ray fluorescence spectrometers, area array detection systems and low level radiation detection equipment.

In addition to the above monitoring system, the following actions will be taken as part of this initiative:

- The Commonwealth is working to continuously improve upon surveillance and information systems to facilitate early detection and mitigation of disease. For example, the Office of Epidemiology is partnered with the Johns Hopkins Essence Syndrome Surveillance System and the Bio-Watch System (an effort funded primarily from CDC grants).

- In addition to the development of these surveillance programs, the Commonwealth provides continuous training on reporting systems to enhance the data collection process and improve the quality of data reports.
- A web-based disease reporting system has been implemented, but more resources are needed to sustain the effort.
- There is a DNDO Pilot Project – Located in Frederick County – that involves a Portal for interdicting radiological cargo. VDOT has the lead, assisted by the Virginia State Police.
- Southeast Transportation Corridor Project – Interstate highway transportation campaign – I 81: Training and equipment is being tested along the I 81 corridor, mostly at the hospitals. Training is ongoing for the next several years.
- The acquisition of the following assets is recommended as part of this initiative:
  - Biological Detection System
  - Air Trailers
  - Cascade systems
  - SAAC Gamma Ray Detectors
  - FTIR Accessories
  - FTIR Maintenance
  - Air Sampling Canisters
  - PPE
  - Radios
  - Lab Supplies
  - Computer Upgrade
- The Terrorism Training Program will continue to conduct educational courses for public safety and other responder disciplines in the Commonwealth using in-house or contracted instructional personnel. In addition non-employee / non-funded “Instructors” for the Public Safety Response to Terrorism – Awareness course are expected to provide an additional courses that are supported with program materials (textbooks, A/Vs and other handouts).

#### Geographic Scope:

This Initiative will allow increased detection and identification of CBRNE compounds throughout the Commonwealth but will likely be used most often in areas of high population density such as the National Capital Region, the Tidewater area (to include Norfolk, Newport News, etc.) and Richmond metro area. Because a large amount of the equipment is mobile, it will also be able to be used in small and rural communities if needed. Due to the high cost and significant amount of training required to operate the advanced level CBRNE equipment, it will be housed with experts such as Virginia Department of Emergency Management Regional Directors and National Guard Civil Support Team.

The fixed site CBRNE equipment will be installed at high profile, critical infrastructure facilities in the Richmond area (such as a government building in the downtown region near the Capital



Complex or an area surrounding a major rail interchange). These facilities will be chosen for the initial phase of the project to determine equipment capabilities. The equipment, after the initial demonstration phase, can be relocated to other areas as needed to provide additional data to locations such as ports, major transportation facilities and additional public buildings.

#### Program Management:

VDEM together with the Virginia National Guard's Civil Support Team will jointly test and evaluate the new mobile CBRNE equipment. VDEM and the State Laboratory will jointly construct the model fixed site monitoring equipment at a high profile government facility or the area surrounding a commercial rail or ship yard. Funding for personnel to evaluate the CBRNE mobile equipment will be the responsibility of the VDEM and the Virginia National Guard Civil Support Team. Long term maintenance and calibration will be the responsibility of the organization "owning" the equipment. Funding for additional CBRNE detection equipment at extra sites throughout the Commonwealth to compliment that purchased through this Initiative will come from local, State and Federal funding sources.

As part of this initiative, the operational regions will develop regional plans to support preparedness and response initiatives. Each region's plan should include profiles of infrastructure, critical facilities, and resources to support operations. State and local governments will also partner with VDOT, rail, water and other critical transportation nodes to enhance initiatives to deter threats to vital infrastructure. Each of the preceding initiatives identified in the Secure Commonwealth Initiative Strategic Plan will be accomplished or enhanced through strengthening CBRNE detection and identification efforts which involves the placement of fixed and mobile CBRNE detection instrumentation.

#### **Explosive Device Response Operations Capability:**

***Develop an enhanced and uniform response to explosive devices. (need targets)***

#### Description:

This initiative focuses on the development and validation of standard training and response procedures for use by State agencies, local jurisdictions, colleges and universities. This effort will employ appropriate NIMS components, provide compatibility with State and NRP protocols and ensure an appropriate level of equipment to safely mitigate the explosive hazard. The Commonwealth's accredited bomb squads will be prepared to respond and handle any circumstances in which explosive devices may contain chemical, biological, radiological or nuclear materials.

#### Geographic Scope:

This is a statewide initiative applicable to all State and local agencies that currently have certified bomb technicians. The Virginia State Police Bomb Squad will provide assistance to local law-enforcement agencies that have accredited bomb squads and will provide complete service to law-enforcement agencies that do not have an accredited bomb squad. This initiative will promote regionalism among bomb technicians, training, sharing of information, and the identification and utilization of specialized equipment.

#### Program Management:

During the implementation phase, VSP's Bomb and Arson Special Agent In Charge would serve as the link between the Commonwealth, the stakeholders group, and any vendors for advice, assistance, and coordination of training. The Commonwealth proposes that State and local bomb technicians help identify appropriate procedures and develop a standard training program for bomb technicians. State and local bomb technicians will also provide explosive device awareness training to citizen groups and other law-enforcement agencies. The Commonwealth will provide education/training to first responders to reduce the risk from hazards associated with IEDs.

Grant funds will be focused and directed toward enhancing existing equipment and developing appropriate inter-jurisdictional coordination. These funds will help address equipment deficiencies that impact the safety of the emergency responders, law-enforcement responders, bomb technicians and the general public. Regionally-based equipment could be utilized and drawn from for use in emergency operations, special/high risk events, bombings or terrorist threats. Implementation of this initiative will require in part, the following considerations:

- Additional bomb suits (of various sizes) are needed in case there is contamination of the first suit.
- Damaged P.A.N. Disrupters need replacement.
- Robots require regular upgrades in technology, and replacement parts are necessary in cases where there is contamination.

#### **WMD/Hazardous Materials Response and Decontamination Capability:**

##### ***Improve HAZMAT/WMD Identification and Decontamination Capabilities. (WMD Targets 1, 2)***

#### Description:

The Commonwealth of Virginia has had hazardous materials emergency response capabilities since the early 70s. In 1987 the General Assembly established the Virginia Hazardous Materials Emergency Response Program. This program charged VDEM with the responsibility of coordinating the development of a hazardous materials training program and to administer the implementation of the Virginia Hazardous Materials Response Program. Since that time, the Commonwealth of Virginia has taken a statewide approach, regionalized into eight response areas. All these areas have some potential for a WMD incident or major disaster. Local government personnel are generally trained to the awareness level with approximately 50% of fire fighters trained to the operations level of hazardous materials and WMD. Actions to achieve the above initiative include:

- Providing additional equipment and training for Virginia's hazardous materials response system will augment an existing and robust capability.
- Current certification standards will be maintained, and training, equipment, and exercise development will be improved.
- Annual enhancement of regional, multi-agency (local, state, and federal) exercises to include all disciplines with major emphasis placed on victim(s) rescue and mass decontamination.

- Purchase, maintain, and receive appropriate training on multi-detection equipment for every responder in the Commonwealth included in NFPA 472, to include PPE as well.
- Increased training for WMD-sampling for environmental, evidence collection, agriculture and laboratory field-testing; purchase and maintain advanced air-borne and WMD sampling equipment and training to interrupt the date; purchase and maintain advance collection kits.

#### Geographic Scope:

Through the Virginia Hazardous Materials Response System, this initiative is statewide.

#### Program Management:

Virginia's Hazardous Materials Response Program is governed under the Virginia Oil and Hazardous Materials Response Plan. This Plan provides a description of all Program assets (State, local, and private sector) and their interrelationships. The Hazardous Materials Response Program has been in place since 1987 and falls under the purview of VDEM. The Virginia State Police control the CCI units, and the National Guard has control of the CST. The close working relationships between these state agencies will ensure and appropriate coordination within their individual governance structures.

## **E. Resources**

### **Resources Expended in FY 2007**

#### **Interview w/ Brett Burdick**

Receiving approximately 1/2M per year. Since 1999, approximately \$30,000 has been provided for equipment.

**Bomb Squad Robots:** The National Bomb Squad Commanders Advisory Board has mandated bomb squad robots for all bomb squad teams in order to retain accreditation, beginning in 2009. The cities of Alexandria and Richmond, Henrico County and the Virginia State Police will receive this investment for the equipment and training required for robotic bomb disposal.

**\$676,000**

**Enhance Response Capabilities to Chemical, Biological, Radiological, Nuclear, and Explosive Incidents** – This investment allows localities to ensure locally trained teams have specific types of equipment to respond to chemical, biological, radiological, nuclear and explosive incidents.

**\$2,047,500**

### **Future Resources Required**

Need info here